

REMARKS

These remarks follow the order of the paragraphs of the office action. Relevant portions of the office action are shown indented and italicized.

DETAILED ACTION

Response to Arguments

2. *Applicant' arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.*

In response to applicant' argument, " uses a Web browser over and over. Tanigawa is not concerned with a browserless technique. See for example, Tanigawa col. 9, lines 23 and 25, Tanigawa col. 28, line 66, and Tanigawa col. 23, lines 7-13 reads- the processes presented by these tags can be performed in the same way as a conventional browser...." (page 10-page 13), the Examiner respectfully disagrees.

Tanigawa discussed about conventional browser in order to compare with the invention or to highlight the advantage of his invention. Tanigawa discloses the processes represented by these tags can be performed in the same way as a conventional browser (col. 23, lines 7-9). Tanigawa does not disclose or indicate the tags can be performed by a conventional browser. Particularly, Tanigawa discloses the present embodiment describes the case when in order to display WWW home pages on the Internet, the data communication system 100 uses a one to many TV broadcast to is perform simulated bidirectional communication, so that when compared to the case when home pages are displayed by a web browser on a personal computer... (col. 28, lines 62-67), and the advantage of the Tanigawa' invention over the use of conventional browser is " display of the user' desired pages on the display unit can be performed at a high speed which unaffected by congestion. Since display image information is sent in a conventional TV format, the display of full color, high-resolution images can easily be achieved by the display unit, make full use of the component (while the display or display images generated by a browser for display on a TV monitor does not make full use of the component) -col. 28, line 66-col. 29, line 11. Thus, Tanigawa is concerned with " browsing"

For reason above, Tanigawa' disclosure is read on a method for browsing the Web on the Internet, comprising using a browserless broadcast system. In response to Applicant' argument that Tanigawa doesn' show "receiving unit for receiving and decoding the transmitted video data and directly transmitting the data to a video display device" (page 13, paragraph 2), the Examiner respectfully disagrees.

Tanigawa discloses the transmitted MPEG 2 is received and processed at the receiving apparatus using separating unit, received data holding unit, reproducing unit, control unit, and the processed data transmitted to display unit (e.g., display unit 154) for display (see include, but are not limited to, figure 1, col. 20, lines 13-67). Thus, the limitation "unit" is read on separating unit, received data holding unit, reproducing unit, control unit; the MPEG-2 data must be decoded before it is displayed on display unit.

Applicant further argues Tanigawa fails teach a step of "an association between a link provided to the video data and a position of a cursor in the video data transmitted to the video display device by comparing a position coordinate of the cursor with coordinates of points included in area links linked to other web pages and the like" (page 15, lines 18-24).

In response, this argument is respectfully traversed. Tanigawa further discloses link information including image link, web page link, etc. and position of cursor (e.g., position coordinate of the icon, cursor/supplemental design, etc. are provided in the multiplexed signal (see include, but are not limited to, col. 3, lines 1-30, col. 4, lines 1-13, col. 5, lines 5-9, lines 56-67, col. 10, lines 36-67, col. 12, lines 15-30, col. 20, line 50-col. 21, line 12). When link areas (e.g., 1801, 1901, etc.

-figures 18-21) is selected, the cursor position is determined and a predetermined web page associated to the selected link area is retrieved (see include, but are not limited to, figures 7-11b, 16-21, 26-27, col. 2, lines 50-67, col. 10, lines 35-61, col. 12, lines 15-30, col. 13, lines 46-62, col. 20, line 50-col. 21, line 18, col. 21, lines 54-67, col. 23, lines 30-46, col. 24, lines 29-51, col. 24, line 64-col. 25, line 17, col. 27, line 19-48). Thus, an association between a link (e.g., link to web page, html page, etc.) provided to the video data and a position of a cursor (cursor position) in the video data transmitted to the video display device (e.g., display unit) must be established by comparing a position coordinate of the cursor (cursor position) with coordinate of points (e.g., based on X.Y coordinates) including in the area links (area of hot spots, or links 1801, 1901, etc.) linked to other web pages or the like so that when the cursor select a link area, predetermined web page/ html page associated with the selected area link is activated and retrieved for display.

In addition, if a position coordinate of the cursor is not compared with coordinate of points included in area links linked to other web pages and the like, how can

web page/page and the like associated with the selected link area are displayed when a cursor points to and selects on a link area?

*In response to Applicant' argument Tanigawa fails to show that claims 13-15, 19-20 are made obvious by Tanigawa (page 18, line 27-page 19, line 10), the Examiner respectfully disagrees. The Examiner provides Karlton et al. (US 5,835,717 - see the claims), Bruck et al. (US 6,008,836 - see the claims), or Aggarwal et al. (US 6,360,227 - see claims) as just few examples to support that it would have been obvious to one of ordinary skill in the art to embody the procedures of a method in a "readable medium" or program storage device readable by machine" or "program product" in order that the instructions could be automatically performed by a processor.
For the reasons given above, rejections on claims 1-20 are analyzed as follow.*

In response the applicants respectfully state that they request that the Examiner reconsider the remarks made previously, in so much that it should be apparent that Tanigawa fails to anticipate the present claims.

Claim Rejections -35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless - .(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7-9, 11-12, 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanigawa et al. (US 5,973,681).

Regarding claim 1, Tanigawa discloses a method for browsing the Web on the Internet, comprising using a browserless broadcast system (see figures 1-2, col. 19, lines 7-43, col. 20, lines 50-67, col. 28, line 61-col. 29, line 11), which includes:

In response, the applicants respectfully state that exception is taken with the comparison of the elements of claim 1 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to show that claim 1 reads on Tanigawa. It is not contestable that many similar components and elements for receiving, transmitting and

displaying are used in Tanigawa, these are used functionally in different ways than as used in claim 1. Besides, claim 1 is further amended to bring the application to allowance quickly. Claim 1 as amended reads [with emphasis added]:

1. A method for browsing the Web on the Internet, comprising using a browserless broadcast system which includes:

a transmitting unit for compressing video data in accordance with a predetermined compression scheme and transmitting the compressed data;

and a receiving unit for receiving and decoding the transmitted video data and directly transmitting the data to a video display device, comprising the steps of:

converting a web page transmitted to the transmitting unit from the Internet into video data;

compressing the video data in accordance with the predetermined compression scheme;

transmitting the compressed video data;

receiving and decoding the transmitted video data using the receiving unit to directly transmit the decoded data to a video display device, without requiring a browser application; and

establishing an association between a link provided to the video data and a position of a cursor in the video data transmitted to the video display device by comparing a position coordinate of the cursor with coordinates of points included in area links linked to other web pages and the like.

In order to anticipate a claim the reference must anticipate and have all the elements of the claim. Tanigawa fails to anticipate all the elements of claim 1. The cited portions of Tanigawa fail to show that "[T]anigawa discloses a method for browsing the Web on the Internet, comprising using a browserless broadcast system (see figures 1-2, col. 19, lines 7-43, col. 20, lines 50-67, cot. 28, line 61-col. 29, line 11)," as alleged in the office communication. There is no indication, reference or concern shown for browserless browsing in Tanigawa Figures 1-2, col. 19, lines 7-43, col. 20, lines 50-67, cot. 28, line

61-col. 29, line 11. Tanigawa Figures 1-2, are described in Tanigawa column 6, as "FIG. 1 is a block diagram showing the structure of the data communication system 100 of the first embodiment of the present invention," and "FIG. 2 shows an example file list 200 stored in the file list storing unit 121." A review of Tanigawa Figs 1 and 2 shows that Tanigawa doesn't have "a receiving unit for receiving and decoding the transmitted video data and directly transmitting the data to a video display device." Tanigawa doesn't allude to the direct transmission of video data from a receiving device to a video display device.

Applicants fail to understand the relevance of the cited portions [copied below] of Tanigawa's multiplexing technique to the elements of claim 1. Tanigawa col. 19, lines 7-43, reads;

"The multiplexing unit 115 multiplexes the display image information (including the audio information) and the link information read by the transmission data reading unit 114, and outputs multiplexed data to the transmitting unit 116. Here, this multiplexing can be performed using the same method as conventional teletext broadcasting. In such a case, display image information and audio information are multiplexed in the same way as the images and audio included in conventional TV broadcasts, while link information is multiplexed in the same way as the text information multiplexed with teletext broadcasts. This in to say, when no audio information is present, the display image information is transmitted in the image section of one frame of the television image signal, while the link information is transmitted in the retrace section of the same one frame of the television image signal. When audio information is present, the audio information is transmitted as the television audio signal, while the corresponding display image information and link information are transmitted in the image area and retrace area, respectively, of the television image signal for the number of frames required by the reproduction of the audio information;

The transmitting unit 116 successively transmits the transmission data which has been multiplexed by the multiplexing unit 115 on a TV broadcast ground wave.

Transmission Method for the Transmission Data

FIG. 11A gives a graphic representation of the transmission method used by the transmitting unit 116. FIG. 11A shows the case when n pages (n being a positive integer) of transmission data are generated by the transmission data generating unit 112. In FIG. 11A, a pairing of audio information and display image information with a same identification number is expressed as one transmission unit corresponding to a normal TV broadcast, and the link information for the same

identification number is expressed as one transmission unit corresponding to the text information which is multiplexed into a standard teletext broadcast.

Applicants also fail to see how this is relevant to the elements of claim 1.

Tanigawa col. 20, lines 50-67, reads:

The symbols "V1, A1, L1" in the transport stream represent the display image information, audio information, and link information which have the identification number "0001" and which are read from the transmission data file and multiplexed together. This is also the case for "V2, A2, L2" . . . "Vn, An, Ln". "V1" is a video elementary stream which shows the display image information which has been converted into I (Intra) pictures under MPEG2 standard, with the PID (Packet Identifier) "0x0100" having been attached to identify the stream. This is also the case for "V2" . . . "Vn".

"A1" is an audio elementary stream which shows the audio information which has been converted under MPEG2 standard, with the PID "0x0101" having been attached to identify the stream. This is also the case for "A2" . . . "An".

"L1-Ln" are private sections according to MPEG2 standard for attaching each set of link information, with the PID "0xB0" having been attached to identify these as private

Applicants fail to see how this is regarding Tanigawa's audio elementary stream, etc., is relevant to the elements of claim 1.

Also, Tanigawa col. 28, line 61-col. 29, line 11, reads:

The present embodiment describes the case when in order to display WWW home pages on the Internet, the data communication system 100 uses a one-to-many TV broadcast to is perform simulated bidirectional communication, so that when compared to the case when home pages are displayed by a browser on a personal computer, the display of the user's desired pages on the display unit 154 can be performed at a high speed which is unaffected by congestion. Since display image information is sent in a conventional TV format, the display of full color, high-resolution images can easily be achieved by the display unit 154. Also, while the display or display images generated by a browser for display on a TV monitor does not make full use of the components, such as the reproduction processing for display images, conventionally provided inside a TV, the present embodiment can achieve simulated bidirectional communication which makes full use of circuitry, such as memory and decoders, conventionally provided inside a TV set.

Applicants fail to see how this one to many specific technique is relevant to the elements of claim 1.

Also, applicants respectfully state that exception is taken with the office communication statement that Tanigawa anticipates:

"establishing an association between a link provided to the video data and a position of a cursor in the video data transmitted to the video display device (e.g. see include, but is not limited to, figures 18a-20, col. 23, lines 30-37, col. 24, lines 46-50, col. 25, lines 5-18, col. 26, lines 17-52)."

A review of the Tanigawa cited portions fails to show any concern of Tanigawa of any association between a link provided to the video data and a position of a cursor.

Tanigawa, indeed fails to teach a step of "establishing an association between a link provided to the video data and a position of a cursor in the video data transmitted to the video display device." Tanigawa certainly fails to disclose an association established "by comparing a position coordinate of the cursor with coordinates of points included in area links linked to other web pages and the like." Thus claim 1 and all claims that depend on claim 1 are allowable over the reference.

a transmitting unit for compressing video data in accordance with a predetermined compression scheme and transmitting the compressed data (transmission data generating, transmitting data holding unit, transmitting data reading unit, multiplexing unit, transmitting unit- hereinafter referred to as transmitting unit-compressing video data in MPEG-2 for transmitting over digital satellite broadcasting to the receiving apparatus 150 - see include, but is not limited to, figure 1, col. 20, lines 12-67);

Applicants review the many references of Tanigawa and fail to see the alleged teaching in these portions of the present claims:

Tanigawa col. 20, lines 12-67 reads:

The multiplexing unit 115 has also been described as multiplexing the display image information (including the audio information) and the link information which are generated by the transmission data generating unit 112, with the transmitting unit 116 transmitting the transmission data which has been multiplexed by the multiplexing unit 115 on a TV broadcast ground wave, although the display image information and link information do not need to be multiplexed together for transmission. As one example, the display image information and the audio

information may be transmitted on a TV broadcast ground wave or as a digital satellite broadcast, while the link information may be transmitted using a telephone link and modem, or the like. Transmission here may alternatively be performed using multiple channels.

When digital satellite broadcasting is used as the data transmission method, compression/encryption and multiplexing may be performed according to MPEG2 (Moving Pictures Experts Group) video standard and system standard, so that display image information may be set as I pictures, with the audio and link information being set as private information. Here, when it is possible for the display image information, audio information, and link information to be transmitted as digital data, it is no longer necessary to write a graphic representation of the identification number into the non-displayed area of the display image information, so that the identification number can be simply appended to the display image information and audio information, in the same way as with the link information. Incidentally, a detailed description of MPEG2 standard is given in "Saishin MPEG Kyoukasho [Latest MPEG Reader]" published by ASCII Publishing, Inc.

FIG. 11B shows the multiplexed stream which is transmitted when digital satellite broadcasting is used. The upper part of this drawing shows a transport stream under MPEG2 standard which has been generated by the multiplexing unit 115.

The symbols "V1, A1, L1" in the transport stream represent the display image information, audio information, and link information which have the identification number "0001" and which are read from the transmission data file and multiplexed together. This is also the case for "V2, A2, L2" . . . "Vn, An, Ln". "V1" is a video elementary stream which shows the display image information which has been converted into I (Intra) pictures under MPEG2 standard, with the PID (Packet Identifier) "0x0100" having been attached to identify the stream. This is also the case for "V2" . . . "Vn".

"A1" is an audio elementary stream which shows the audio information which has been converted under MPEG2 standard, with the PID "0x0101" having been attached to identify the stream. This is also the case for "A2" . . . "An".

"L1-Ln" are private sections according to MPEG2 standard for attaching each set of link information, with the PID "0xB0" having been attached to identify these as private sections. Here, identification numbers are also set in the table ID extensions to identify separate sets of link information. Each of these sets of link information is set at least one pairing of one part of the image area of the corresponding display image and information showing a link to another display image. An example, in "L1", the display area centered on the coordinates (X,Y)=(100,600) is set the link "GOTO.sub.-- PAGE:(0002)" representing a link to the display image with the identification number "0002", while the display area centered on the coordinates

(X,Y)=(10, 700) is set the link "GOTO.sub.-- PAGE(0003)" representing a link to the display image with the identification number "0003".

The correspondence between the PIDs described above and the identification numbers is set according to the PMT (Program Map Table) under MPEG2 standard. Here, the correspondence between the PIDs and the identification numbers can be written in the descriptors of the private sections, such as by setting the identification numbers as the component tags in the PMT, as shown in FIG. 11B.

In the above case, the video elementary stream, audio elementary stream, and private

Thus, a review of these sometimes lengthy reference fails to teach the elements of the present claims. It continues:

and a receiving unit for receiving and decoding the transmitted video data and directly transmitting the data to a video display device (e.g., separating unit, received data holding unit, reproducing unit, and control unit, process the received MPEG-2 and transmitted the processed signal directly to display unit 154 for display (see include, but are not limited to, figure 1, col. 23, line 53-col. 25, line 18. Since the data is received in encoded MPEG-2 (col.20, lines 28-34), the received MPEG-2 data must be decoded before it is displayed), the method comprising the steps of:

col.20, lines 28-34 reads:

When digital satellite broadcasting is used as the data transmission method, compression/encryption and multiplexing may be performed according to MPEG2 (Moving Pictures Experts Group) video standard and system standard, so that display image information may be set as I pictures, with the audio a information and link information being set as private information. Here, when it is possible for the display image information, audio information, and link information to be transmitted as digital data

In response the applicant respectfully states the action continues:

converting a web page transmitted to the transmitted unit from the Internet into video data (e.g., converting page information into image data, control information, and supplementary design information see include, but is not limited to, col. 3, lines 1-15, col. 11, lines 60-67);

col. 3, lines 1-15 reads:

With the above construction, page information received from an external source can be converted into image data, control information, and supplementary design information which indicates a combining of supplementary designs for each set of image data, these sets of data being suited to broadcasting

Here, the obtaining unit may obtain the page information from the World Wide Web on the Internet.

With the above construction, the transmitting apparatus can convert HTML documents on WWW servers on the Internet into image data, control information, and supplementary design information which it then broadcasts. As a result, the transmitting apparatus can provide users with an interactive program which resembles "net surfing" on the Internet using only a TV broadcast wave.

The action continues:

compressing the video data in accordance with the predetermined compressing scheme (comprising the display image data, audio, link information, into MPEG-2 for broadcasting - col. 20, lines 13-44);

col. 20, lines 13-44 reads:

multiplexing the display image information (including the audio information) and the link information which are generated by the transmission data generating unit 112, with the transmitting unit 116 transmitting the transmission data which has been multiplexed by the multiplexing unit 115 on a TV broadcast ground wave, although the display image information and link information do not need to be multiplexed together for transmission. As one example, the display image information and the audio information may be transmitted on a TV broadcast ground wave or as a digital satellite broadcast, while the link information may be transmitted using a telephone link and modem, or the like. Transmission here may alternatively be performed using multiple channels.

When digital satellite broadcasting is used as the data transmission method, compression/encryption and multiplexing may be performed according to MPEG2 (Moving Pictures Experts Group) video standard and system standard, so that display image information may be set as I pictures, with the audio a information and link information being set as private information. Here, when it is possible for the display image information, audio information, and link information to be transmitted as digital data, it is no longer necessary to write a graphic representation of the identification number into the non-displayed area of the display image information, so that the identification number can be simply appended to the display image information and audio information, in the same way as with the link information. Incidentally, a detailed description of MPEG2 standard is given in "Saishin MPEG Kyoukasho [Latest MPEG Reader]" published by ASCII Publishing, Inc.

The action continues:

transmitting the compressed video data (transmitted the MPEG-2 stream including video stream, display image information, audio stream, audio information, and link information, etc.— see include, but are not limited to, col. 20, lines 13-67, figures 1, 11B);

col. 20, lines 13-67 reads:

The multiplexing unit 115 has also been described as multiplexing the display image information (including the audio information) and the link information which are generated by the transmission data generating unit 112, with the transmitting unit 116 transmitting the transmission data which has been multiplexed by the multiplexing unit 115 on a TV broadcast ground wave, although the display image information and link information do not need to be multiplexed together for transmission. As one example, the display image information and the audio information may be transmitted on a TV broadcast ground wave or as a digital satellite broadcast, while the link information may be transmitted using a telephone link and modem, or the like. Transmission here may alternatively be performed using multiple channels.

When digital satellite broadcasting is used as the data transmission method, compression/encryption and multiplexing may be performed according to MPEG2 (Moving Pictures Experts Group) video standard and system standard, so that display image information may be set as I pictures, with the audio a information and link information being set as private information. Here, when it is possible for the display image information, audio information, and link information to be transmitted as digital data, it is no longer necessary to write a graphic representation of the identification number into the non-displayed area of the display image information, so that the identification number can be simply appended to the display image information and audio information, in the same way as with the link information. Incidentally, a detailed description of MPEG2 standard is given in "Saishin MPEG Kyoukasho [Latest MPEG Reader]" published by ASCII Publishing, Inc.

FIG. 11B shows the multiplexed stream which is transmitted when digital satellite broadcasting is used. The upper part of this drawing snows a transport stream under MPEG2 standard which has been generated by the multiplexing unit 115.

The symbols "V1, A1, L1" in the transport stream represent the display image information, audio information, and link information which have the identification number "0001" and which are read from the transmission data file and multiplexed together. This is also the case for "V2, A2, L2" . . . "Vn, An, Ln". "V1" is a video elementary stream which shows the display image information which has been converted into I (Intra) pictures under MPEG2 standard, with the PID (Packet IDentifier) "0x0100" having been attached to identify the stream. This is also the case for "V2" . . . "Vn".

"A1" is an audio elementary stream which shows the audio information which has been converted under MPEG2 standard, with the PID "0x0101" having been attached to identify the stream. This is also the case for "A2" . . . "An".

"L1-Ln" are private sections according to MPEG2 standard for attaching each set of link information, with the PID "0xB0" having been attached to identify these as private sections. Here, identification numbers are also set in the table ID extensions to identify separate sets of link information. Each of these sets of link information is set at least one pairing of one part of the image area of the corresponding display image and information showing a link to another display image. An one example, in "L1", the display area centered on the coordinates (X,Y)=(100,600) is set the link "GOTO.sub.-- PAGE:(0002)" representing a link to the display image with the identification number "0002", while the display area centered on the coordinates (X,Y)=(10, 700) is set the link "GOTO.sub.-- PAGE(0003)" representing a link to the display image with the identification number "0003".

The correspondence between the PIDs described above and the identification numbers is set according to the PMT (Program Map Table) under MPEG2 standard. Here, the correspondence between the PIDs and the identification numbers can be written in the descriptors of the private sections, such as by setting the identification numbers as the component tags in the PMT, as shown in FIG. 11B.

In the above case, the video elementary stream, audio elementary stream, and private

The action continues:

receiving and decoding the transmitted video data using the receiving unit to directly transmit the decoded data to a video display device, without requiring a browser application (receiving and processing the transmitted MPEG-2 using separating unit, received data holding unit, reproducing unit, control unit, signal receiving and transmitted the processed data to display unit 154 for display -see include, but is not limited to, figure 1, col. 20, lines 13-67, col. 23, line 50-col. 24, line 50, col. 28, line 47-col. 29, line 11; the MPEG-2 data must be decoded before it is displayed. Since the receiving apparatus does not have a browser (discussed in "to Argument" above), the processed data is directly transmitted to the display unit without requiring a browser application).

col. 20, lines 13-67 reads as stated above.

col. 23, line 50-col. 24, line 50 reads:

The following is an explanation of the components of the data receiving apparatus 150, with reference to FIGS. 16 to 20.

Structure of the Separating Unit 151

The separating unit 151 includes a read buffer 161 for reading the identification number allotted to transmission data. The read buffer 161 has storage areas for temporarily holding the display image information (including audio information) included in one transmission file and the link information included in one transmission file.

The separating unit 151 separates display image information (including audio information) and link information from the received transmission data, and stores the separated display image information and link information in the corresponding storage areas of the read buffer 161. The identification number assigned to the display image information stored in the storage area is read by recognizing the image written in the predetermined part of the non-displayed area of the display image information. The identification number assigned to the link information is read in the same manner as when reading an identification number assigned to a conventional digital data file. If the read identification number is the identification number designated by the control unit 155, the display image information (including audio information) or the link information held by the read buffer 161 is stored in the corresponding storage area in the received data holding unit 152. At this point, any audio information which is present is stored by the separating unit 151 in a corresponding storage area provided in the received data holding unit 152 at the same time as the display image information is stored, so that the audio information is gradually accumulated while the display image information with the identification number designated by the control unit 155 is repetitively transmitted. By doing so, audio information which is transmitted across a plurality of frames can be separated from the transmission data.

If the read identification number is not the identification number designated by the control unit 155, the display image information (including audio information) or its link information held by the read buffer 161 is discarded. The reading of new display image information (including audio information) and link information is continued, and the above procedure is repeated until the identification number designated by the control unit 155 is detected.

Structures of the Received Data Holding Unit 152, the Reproducing Unit 153

col. 28, line 47-col. 29, line 11 reads:

As described above, in the present embodiment the display image information, which conventionally would have had to have been generated by the data receiving apparatus 150 while the data receiving apparatus 150 is interpreting the control information, is generated and transmitted by the data transmitting apparatus 110, which reduces the load of each data receiving apparatus 150. Also, when compared with the large number and variety of display control processes for display character strings which were conventionally written into the control information, the link information of the present embodiment contains a smaller number and less variety of control processes. As a result, simulated bidirectional communication can be easily achieved by the data receiving apparatuses 150 using this link information.

The present embodiment describes the case when in order to display WWW home pages on the Internet, the data communication system 100 uses a one-to-many TV broadcast to perform simulated bidirectional communication, so that when compared to the case when home pages are displayed by a browser on a personal computer, the display of the user's desired pages on the display unit 154 can be performed at a high speed which is

unaffected by congestion. Since display image information is sent in a conventional TV format, the display of full color, high-resolution images can easily be achieved by the display unit 154. Also, while the display or display images generated by a browser for display on a TV monitor does not make full use of the components, such as the reproduction processing for display images, conventionally provided inside a TV, the present embodiment can achieve simulated bidirectional communication which makes full use of circuitry, such as memory and decoders, conventionally provided inside a TV set.

In response the applicants respectfully take continued exception with the office communication allegations of the teaching of claim 1 elements by Tanigawa. The action continues:

Tanigawa further discloses link information including image link, web page link, etc. and position of cursor (e.g., position coordinate of the icon, cursor/supplemental design, etc. are provided in the multiplexed signal (see include, but are not limited to, col. 3, lines 1-30, col. 4, lines 1-13, col. 5, lines 5-9, lines 56-67, col. 10, lines 36-67, col. 12, lines 15-30, col. 20, line 50-col. 21, line 12).

Tanigawa col. 3, lines 1-30 reads:

With the above construction, page information received from an external source can be converted into image data, control information, and supplementary design information which indicates a combining of supplementary designs for each set of image data, these sets of data being suited to broadcasting

Here, the obtaining unit may obtain the page information from the World Wide Web on the Internet.

With the above construction, the transmitting apparatus can convert HTML documents on WWW servers on the Internet into image data, control information, and supplementary design information which it then broadcasts. As a result, the transmitting apparatus can provide users with an interactive program which resembles "net surfing" on the Internet using only a TV broadcast wave.

Here, the determining unit may determine a headline as the specified image part, and the generating unit may generate supplementary design combining information which indicates a combining of the specific image part with a supplementary design for bold display.

With the above construction, the transmitting apparatus can detect the headline written in an HTML document on a WWW server on the Internet and can generate supplementary design combining information indicating a combining of the supplementary design at an image position of the headline. The receiving apparatus

receives this supplementary design combining information and combines a supplementary design, which is made up of a frame which surrounds the title of the image data, with the image data to emphasize the title of the image data.

Tanigawa col. 4, lines 1-13 reads:

system using a broadcast wave, wherein the broadcast wave is produced by multiplexing a plurality of frames of image data, and control information which includes image link information for each frame of image data showing links with other frames or image data and supplementary design combining information indicating the combining of a supplementary design with the plurality of frames of image data, the broadcast wave being repeatedly transmitted, and the supplementary design being combined with an image of the image data, wherein the receiving apparatus includes: a separating unit for separating a frame of image data and corresponding control information from the broadcast wave; a supplementary design storage unit for storing at least one

col. 5, lines 5-9 reads:

combines the supplementary design, which is a frame which surrounds the title of the display image, with the image data to emphasize the title.

Here, the classification may indicate one of a character and image to which a link has been attached as the specific image part and the supplementary design specifying unit may specify a supplementary design which shows that the specific image part has an attached link to other image data.

With the above construction, the transmitting apparatus receives supplementary design combining information and combines the supplementary designs showing links to other image data at the positions of characters or images which are linked to other sets of image data, so that the characters or images which are linked to other sets of image data are emphasized in the display.

Thus applicants respectfully state that these fail to show anticipation of claim 1. Thus, claim 1 and all claims that depend on claim 1 are allowable over Tanigawa.

Regarding claim 2, Tanigawa discloses a method as discussed in the rejection of claim 1. Tanigawa further discloses converting a web page comprises providing the link to the video data on the basis of a link provided to the web page (e.g., providing link such as link web page, or html page, etc. to video data, display image or video stream, or MPEG stream based on link (e.g., link to tokyo.html, link to weather.au, or link to www.wbc.com., etc., provided in the web page - see include, but is not limited to, figures 7-10, col. 10, line 23-col. 11, line 67, col. 12, lines 15-42), the step of transmitting the compressed video data comprises transmitting the compressed video data and information about the link

(transmitting the video data comprising transmitting MPEG-2 including video stream, display image, link information, audio information, etc. - see figures 1, 11B, col. 18, line 38-col. 19, line 43, col. 20, line 13-col. 21, line 30).

In response, the applicants respectfully state that a review of the figures and referenced lines of Tanigawa fails to show that Tanigawa even alludes to a step of converting a web page by "providing the link to the video data on the basis of a link provided to the web page," and a step of transmitting that includes transmitting the compressed video data and information about the link." Tanigawa apparently doesn't transmit information about the link. Thus claim 2 is allowable over the cited art for itself and also because it depends on allowable claim 1.

Regarding claim 3, Tanigawa discloses a method as discussed in the rejection of claim

1. Tanigawa further discloses providing a link to the video data comprising: extracting a web address linked to the link provided to the web page (e.g. extracting address/link information linked to "" page, "" page, or read the URL, etc. provided to the web page— see include, but is not limited to, figures 2-10, col. 2, line 50-col. 3, line 8, col. 7, line 60-col. 9, line 61);

placing the link in the video data on the basis of the position of the link provided to the web page (placing the link information including cursor position, page information, coordinate, etc. in the multiplexed stream/ MPEG stream on the basis of the cursor position of the link, or link information, etc. provided to the web page see include, but is not limited to, figures 7-11b, col. 2, line 50-col. 3, line 8; col. 8, lines 30-64, col. 10, lines 1-67, col. 12, lines 15-30, col. 13, lines 35-62, col. 20, line 13-col. 21, line 18).

In response, the applicants respectfully state that Tanigawa's "FIG. 3 shows the HTML document 301 "Report.html" which is the first page of a home page provided by a WWW server." Also, Tanigawa refers to "Tokyo.html"

` TOKYO ` on line 319 of FIG. 3 indicates that the character string "TOKYO" is linked to the HTML document 501 "Tokyo.html" which is shown in FIG. 5.

This apparently does not anticipate a "step of providing a link to the video data," that includes "extracting a web address linked to the link provided to the web page; and

placing the link in the video data on the basis of the position of the link provided to the web page," as in claim 3. Thus claim 3 is allowable over the cited art for itself and also because it depends on allowable claim 1.

Regarding claim 4, Tanigawa discloses a method as discussed in the rejection of claim 2. Tanigawa additionally discloses the step of receiving and decoding the transmitted video data comprises:

decoding the received data (the received MPEG-2 data must be decoded before it is displayed —discussed in rejection of claim 1 above);

transmitting the decoded data to the video display device (transmitting decoded data to display unit 154 —figure 1, col. 24, lines 36-51);

establishing an association between the information about the link provided to the received video data and a position of a cursor in the video data transmitted to the video display device (see discussion in the rejection of claim 1 above).

In response, the applicants respectfully state that exception is taken with the comparison of the elements of claim 4 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to show that claim 4 reads on Tanigawa. The cited portions don't have or allude to a combination of steps for decoding the received data, transmitting the decoded data to the video display device; and establishing an association between the information about the link provided to the received video data and a position of a cursor in the video data transmitted to the video display device. Thus claim 4 is allowable over the cited art for itself and also because it depends on allowable claim 1.

Regarding claim 5, Tanigawa discloses a method as discussed in the rejection of claim 1. Tanigawa also discloses video data includes audio data when web page include voice or sound (broadly interpreted as the multiplexed MPEG-2 includes audio data, when web page include audio information (e.g., weather.au) see include, but is not limited to, figures 2-3, 11b, .col. 9, lines 34-39, col. 18, lines 45-59, col. 17, lines 30-42, col. 18, lines 38-44, col. 19, lines 7-31, col. 20, lines 50-63, col. 21, line 53-57).

In response, the applicants respectfully state that exception is taken with the comparison of the elements of claim 5 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to show that claim 5 reads on Tanigawa. Exception is

taken with the broad interpretation. Tanigawa doesn't allude to video data that includes "audio data when said web page includes voice or sound." Thus claim 5 is allowable over the cited art for itself and also because it depends on allowable claim 1.

Regarding claim 7, Tanigawa discloses a method as discussed in the rejection of claim 1. Tanigawa further discloses the predetermined compression scheme is an MPEP2 standard (col. 20, lines 28-67).

In response, the applicants respectfully state that exception is taken with the comparison of the elements of claim 7 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to show that claim 7 regarding browserless browsing reads on Tanigawa. Thus claim 7 is allowable over the cited art for itself and also because it depends on allowable claim 1.

Regarding claims 8-9, 11-12, the limitations of the broadcast system as claimed correspond to the limitations of the method as claimed in claims 1, 3, and are analyzed as discussed with respect to the rejection of claims 1, 3, 5, 7.

In response, the applicants respectfully state that as with method claim 1, exception is taken with the comparison of the elements of apparatus claims 8-9, 11-12 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to show that claims 8-9, 11-12 read on Tanigawa. This is particularly so, with the narrowing of claim 8 to include "means for establishing an association between the link provided to the video data and a position of a cursor in the video data transmitted to the video display device by comparing a position coordinate of the cursor with coordinates of points included in area links linked to other web pages and the like." Thus claim 8 and all claims that depend on claim 8 are allowable over the reference.

Regarding claims 16-18, the method as claimed is broader in scope than the method as claimed in claims 1-3, and are analyzed as discussed in the rejection of claims 1-3.

In response, the applicants respectfully state that as with method claim 1, exception is taken with the comparison of the elements of apparatus claims 16-18 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to

show that claims 16-18 read on Tanigawa. All the remarks regarding the non-anticipation of Tanigawa of claim 1, are similarly applicable to claim 16. This is particularly so, with the narrowing of claim 16 to include "establishing an association between a link provided to the video data and a position of a cursor in the video data transmitted to the video display device by comparing a position coordinate of the cursor with coordinates of points included in area links linked to other web pages and the like." Thus claim 16 and claims 17-20 that depend on claim 16 are allowable over the reference.

Claim Rejections -35 USC ~ 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-15, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanigawa et al. (US 5,973,681).

Claims 13-15, 19-20 are directed toward embody the method of claims 1, 8, 16 in "readable medium" or "storage device readable by machine" or "program product" It would have been obvious to embody the procedures of Tanigawa as discussed with respect to claims 1, 8, 16 in a "readable medium" or "storage device readable by machine" or "program product" in order that the instructions could be automatically performed by a processor.

In response, the applicants respectfully state that exception is taken with the comparison of the elements of claims 13-15, 19-20 and the art of Tanigawa as stated in the office communication above. A review of Tanigawa fails to show that claims 13-15, 19-20 are made obvious by Tanigawa. Claims 13-15, 19-20 are Beauregard computer type claims. The office communication apparently indicates that there is no place or need for Beauregard computer type claims because of obviousness. It should be very much appreciated that Beauregard computer type claims have special protective value of the

invention to the assignee. Tanigawa apparently makes no illusion to Beauregard computer type claims. In some inventions Beauregard computer type claims are appropriate and in some these are not. Thus claims 13-15, 19-20 are allowable over the cited art, each for itself and also because each depends on an allowable claim.

7. Claims 6, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanigawa et al. (US 5,973,681) as applied to claim 4 or claim 8 above, and in view of Mao et al. (US 7,089,579 B1).

In response, the applicants respectfully state that apparently claims 6 and 10 are not made obvious by the combination of Tanigawa and Mao. It was shown above that Tanigawa doesn't allude to browserless browsing, which are an integral part of claims 6 and 10. The cited art to Mao, US Patent 7,089,579, filed December 6, 1999, is entitled: "System for transporting MPEG video as streaming video in an HTML web page". The Mao abstract reads:

"An implementation of streaming video in HTML (Hypertext Markup Language) Web pages combines video signals in MPEG digital television format with Internet World Wide Web pages in HTML format. Internet streaming video is transcoded into MPEG-2 digital video format and multiplexed along with other MPEG-2 digital video signals for transport within a multiple channel digital video system. A navigational control map, transmitted from the headend to the CATV set-top box in a fixed location in the MPEG-2 video data stream, permits the CATV set-top to find the requested video clip in a predetermined Packet Identifier of the MPEG-2 data stream. The viewer controls the video clip (e.g., play, pause, resume, restart etc.) during the session. In the two-way embodiment, the set-top transmits control commands to the headend, which implements the command in MPEG-2 video. The disclosed arrangement allows the available MPEG-2 decoder hardware in the CATV set-top box to be used to display streaming video without requiring additional hardware or additional RAM memory".

Thus Mao is concerned with streaming video in HTML. Mao is not concerned with browserless browsing as claims 6 and 10. There is apparently no reason to combine Mao

in US Class 725/109, with Tanigawa in US Class 345/327, except in an attempt to find a combination that allegedly makes claims 6 and 10 obvious. Since, there apparently is no reference in the cited art of one to another, it is a use of hindsight to try to find a combination for the elements of claims 6 and 10. This is not allowed in an obviousness rejection. Thus claims 6-10 are allowed over the combination.

Regarding claim 6, Tanigawa discloses a method as discussed in the rejection of claim 4. Tanigawa also discloses the link is selected by the user, and bidirectional communication (see include, but is not limited to, col. 27, line 19-col. 29, line 32). However, Tanigawa does not explicitly disclose sending link information to the transmitting unit when any one link provided to the data transmitted to the video display is selected.

Mao discloses sending link information to the transmitting unit when the link provided to the data transmitted to the video display is selected (see col. 8, lines 5-67, figures 1,4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tanigawa to use the teaching as taught by Mao in order to improve efficiency in transmitting of content that is not stored at the receiving device.

Regarding claim 10, the additional limitations of the system as claimed correspond to the additional limitations of the method as claimed in claim 6, and are analyzed as discussed with respect to the rejection of claim 6.

In response, the applicants respectfully state that exception is taken with the comparison of the elements of claim 1 and the art of Tanigawa and Mao as stated in the office communication above. A review of Tanigawa failed to show that claim 4 reads on Tanigawa. Mao col 8, 5-67, reads:

"The operation of a two-way CATV system embodying the present invention is illustrated in the timing diagram of FIG. 4. The system consists of four computing entities. At the headend there is an application manager 464 (102 in FIG. 1), a two way IP/MPEG server 466 (106 in FIG. 1) and a video stream server 468 (108 in FIG. 1). The set-top 470 (126 in FIG. 1) is at the viewer (user) location. In FIG. 4, various messages are exchanged between the four computing entities 464, 466, 468, 470.

In operation, a Web page from the Internet is cached by the application manager 464, forwarded 450 to the two way IP/MPEG server 466 and transmitted 451 over the CATV system (HFC) to the CATV set-top 470. In the two-way embodiment,

Web pages are transported using the DVB standard for TCP/IP over MPEG cable. See section 7 of the European Broadcasting Union DVB specification EN 301 192 v1.1.1, published by the European Standards Institute (1997) for a description of the TCP/IP over MPEG cable standard. However, the Web page 450 may also be broadcast as part of a rotating carousel of HTML Web pages, as more fully described in the above cited pending patent application.

When the user selects a URL representing streaming video in the Web page being viewed, the selected URL is transmitted 452 back to the application manager 464 in a session request. Return path transport is standard TCP/IP over MPEG cable. The application manager establishes a communication (COM) session and sends a message 454 to the video stream server 468 which transmits a video control map 456 to the set-top 470. The video control map 456, also called the Session Information Table, or SIT, is broadcast in a predetermined PID of the MPEG-2 data stream, and addressed to a specific set-top 470 by the tableIDext field. That is, all set-tops use the same PID to transport the control map (SIT) but use the tableIDext field to filter out the right address. At substantially the same time or shortly thereafter, regular MPEG-2 video 458 corresponding to the requested video clip is transmitted to the set-top 470.

The URL in the session request 452 represents streaming video. If the application manager 464 has not recently cached streaming video for the URL in the session request at the headend, the Internet access server (proxy server 118 in FIG. 1) retrieves the desired streaming video from the designated URL on the Internet. The added or updated streaming video for that URL is cached in the proxy server, transcoded into MPEG-2 video format and stored in the application manager 464. The proxy server and the application manager 464 operate to cache streaming video at the headend, thus storing Internet streaming video content closer to the user.

The viewer at the set-top box 470 location controls the play of the video clip by selecting (clicking on) an action control icon, such as PLAY, PAUSE, RESUME etc. The viewer's control action is transmitted back 460 to the application manager 464, which modifies the running status of the COM session to reflect the viewer's selected control action. In accordance with the new running status, the application manager 464 sends a new communication (COM) message 461 to the video stream server 468 which transmits a modified SIT control map 462 to the set-top 470. For example, from the SIT table definition below, if PAUSE was selected, the running status is change to equal 4 (PAUSE). "

A review of this portion indicates use of some similar words but not functionally as in claims 6 and 10. Mao fails to help Tanigawa to teach or make obvious steps or means for "sending link information to the transmitting unit when any one link provided to the data transmitted to the video display device is selected; and transmitting a web page linked to

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the selected link from the Internet to the transmitting unit," as in claims 6 and 10. Thus claims 6 and 10 are allowable over the cited art, each for itself and also because each depends on an allowable claim.

It is anticipated that this amendment shows that all claims are allowable. If any question remains, please contact the undersigned before issuing a communication with a FINAL status.

Please charge any fee necessary to enter this paper to deposit account 50-0510.

Respectfully submitted,

By: /Louis Herzberg/
Dr. Louis P. Herzberg
Reg. No. 41,500
Voice Tel. (845) 352-3194
Fax. (845) 352-3194

3 Cloverdale Lane
Monsey, NY 10952

Customer Number: 54856